

WHAT IS CLAIMED:

1. A process for measuring bar-shaped articles, comprising:
conveying the bar-shaped articles in a conveyor line; and
optically measuring at least one physical property of the bar-shaped articles.
2. The process in accordance with claim 1, wherein the at least one physical property is a geometric property.
3. The process in accordance with claim 1, wherein the bar-shaped articles comprise filter bars.
4. The process in accordance with claim 1, wherein the process is performed on bar-shaped articles of the tobacco processing industry.
5. The process in accordance with claim 1, wherein the at least one physical property comprises at least one of a length and a diameter of the bar-shaped articles.
6. The process in accordance with claim 1, wherein at least two different physical properties of the bar-shaped articles are measured.
7. The process in accordance with claim 6, wherein the at least two different physical properties are measured at a same time.
8. The process in accordance with claim 1, wherein the at least one physical property is measured several times.
9. The process in accordance with claim 1, wherein the at least one physical property comprises at least two physical properties, and the at least two physical properties are measured several times.
10. The process in accordance with claim 9, wherein the at least two physical properties are measured simultaneously.
11. The process in accordance with claim 1, further comprising pneumatically measuring the at least one physical property.
12. The process in accordance with claim 1, further comprising, after measuring the at least one physical property, determining whether the at least one measured physical property lies within a predetermined measurement range.

13. The process in accordance with claim 1, wherein, when the measured physical property lies outside of the predetermined measurement range, the process further comprises removing the bar-shaped article from at least one of the conveyor line and the manufacturing process.

14. The process in accordance with claim 1, further comprising triggering a start signal, wherein the measurement of the physical property occurs after the start signal is triggered.

15. The process in accordance with claim 14, wherein the start signal is triggered by a light barrier.

16. The process in accordance with claim 1, wherein the at least one physical property is measured in the end area of the bar-shaped articles.

17. The process in accordance with claim 1, wherein two measuring points are arranged along a conveying zone of the bar-shaped articles, and the measuring performed by the two measuring points along the conveying zone of the articles.

18. The process in accordance with claim 17, wherein the two measuring points are arranged to measure the length of the bar-shaped articles.

19. The process in accordance with claim 17, further comprising impinging light upon at least one of the bar-shaped articles and the two measuring points.

20. The process in accordance with claim 19, wherein at least one light source is positioned to impinge light upon the at least one of the bar-shaped articles and the two measuring points.

21. The process in accordance with claim 20, wherein the at least one light source comprises a laser light source.

22. The process in accordance with claim 20, wherein the measurement of at least one physical property is based on an area of the article impinged upon by the light source and based on a brightness profile produced.

23. The process in accordance with claim 22, wherein the brightness profile is detected by a sensor.

24. The process in accordance with claim 23, wherein the sensor comprises a line sensor.

25. A device for conveying bar-shaped articles to a magazine comprising:

an optical measuring device structured and arranged to measure at least one physical property of the filter bars.

26. The device in accordance with claim 25, wherein the bar-shaped articles comprises filter bars and the magazine comprises a filter magazine.

27. The device in accordance with claim 26, further comprising a device that conveys the filter bars in a lengthwise axial manner and feeds the filter bars to the filter magazine in a crosswise axial manner.

28. The device in accordance with claim 25, wherein said measuring device is positioned to measure geometric properties of the bar-shaped articles.

29. The device in accordance with claim 25, further comprising:

a conveyor line arranged to convey the bar-shaped articles; and

said measuring device being arranged along said conveyor line.

30. The device in accordance with claim 25, further comprising a braking device and an accelerating device for the bar-shaped articles; and

said measuring device being located between said braking device and said accelerating device.

31. The device in accordance with claim 30, wherein said braking device comprises a pair of braking rollers; and said accelerating device comprises a pair of accelerating rollers.

32. The device in accordance with claim 25, further comprising:

a crosswise conveying unit for the bar-shaped articles; and

said measuring device being located on said crosswise conveying device.

33. The device in accordance with claim 32, wherein said crosswise conveying device comprises a drum.

34. The device in accordance with claim 25, wherein said measuring device comprises at least one light source and at least one sensor.

35. The device in accordance with claim 34, wherein said at least one light source comprises a laser light source and said at least one sensor comprises a line sensor.

36. The device in accordance with claim 25, wherein the measuring device is structured and arranged to measure a length and a diameter of the bar-shaped articles at a same time.

37. The device in accordance with claim 25, wherein the measuring device comprises one of at least one mirror and a mirror arrangement.

38. The device in accordance with claim 25, further comprising an evaluating device structured and arranged to evaluate measurements from said measuring device.

39. The device in accordance with claim 38, further comprising an ejection device structured and arranged to eject the bar-shaped articles that is coupled to said evaluating device.

40. An apparatus comprising:

a conveyor for bar-shaped articles; and

a measuring device coupled to said conveyor to measure at least one geometric property of the bar-shaped articles.

41. The apparatus in accordance with claim 40, wherein said measuring device comprises a unit for measuring at least one of a length and a diameter of the bar-shaped article.

42. The apparatus in accordance with claim 41, wherein the length and the diameter are simultaneously measured.

43. The apparatus in accordance with claim 42, wherein said measuring device comprises a light source and an optical receiver, and the bar-shaped articles

are conveyed through light emitted from said light source, and the measurement is based upon an amount of the light emitted from said light source that is blocked from said optical receiver by the bar-shaped articles.

44. The apparatus in accordance with claim 41, wherein a position of both ends of the bar-shaped articles are concurrently detected in order to measure the length of the bar-shaped articles.

45. The apparatus in accordance with claim 41, wherein two orthogonal diameters of the bar-shaped articles are concurrently detected in order to measure the diameter of the bar-shaped articles.

46. A process for providing bar-shaped articles, comprising:
conveying the bar-shaped articles; and
measuring at least one geometric property of the bar-shaped articles.

47. The process in accordance with claim 46, wherein the measured geometric property comprises at least one of a length and a diameter of the bar-shaped article.

48. The process in accordance with claim 47, further comprising simultaneously measuring the length and the diameter.

49. The process in accordance with claim 48, wherein the bar-shaped articles are conveyed through light emitted from a light source, and the measurement is based upon an amount of the light emitted from the light source that is blocked from an optical receiver by the bar-shaped articles.

50. The process in accordance with claim 47, further comprising concurrently detecting a position of both ends of the bar-shaped articles in order to measure the length of the bar-shaped articles.

51. The process in accordance with claim 47, further comprising concurrently detecting two orthogonal diameters of the bar-shaped articles in order to measure the diameter of the bar-shaped articles.